SUBJECT: Update on NWS Project to Collect and Distribute WSR-88D Level II Data in Real Time

TO: Participants of June 18, 2003 Level II Public Meeting
NWS Regional Headquarters WSR-88D Focal Points
DOD and FAA WSR-88D Focal Points

FROM: Tim Crum

DATE: 21 July 2004

This is an update of the NWS WSR-88D Level II Data Collection and Distribution Network project summary I sent on 12 July 2004. I am also providing a project summary. Most of the summary information is repeated from earlier updates. However, based on recent calls and emails, I think it is helpful to provide a summary.

1. The modification note for installing the Sonic Wall TZ170 (network address translator) has been completed. Shipments of the hardware to sites begin this week. Shipments will take 3 weeks. Sites will have 60 days to install the hardware, but most will install the hardware shortly after arrival. This modification is needed to: transition the remaining "CRAFT" sites (Attachment 1) to the NWSNet (128 kbps); transition all sites to the BDDS vice using separate PCs/workstations to perform the LDM function and data compression; and switch to the new Build 5 data format that contains a header file with metadata. This software and hardware configuration is the Full Operational Configuration for the NWS sites. This configuration will alleviate the problem of data backlog experienced at some sites still on the prototype CRAFT network during the use of VCP12.
2. The sites that have already installed the hardware modification mentioned above and transmitting the new Build 5 data format are listed at: http://www.roc.noaa.gov/NWS_Level_2/NewFormat_Level2.pdf. I believe it will be difficult for me to update this web site as the 100+ sites install the hardware modification. Thus, users should be aware that if they start having problems reading a Level II data stream the cause might be the transition to the new Build 5 data format.
3. The beta test of Build 6 software at field sites has begun. See the list of test sites and software installation dates (subject to change) below. The software will begin to be released to field sites at the end of September 2004.

    Wichita .... July 20, 2004.
    Little Rock .... July 27, 2004.
    Sacramento .... August 10, 2004.

Reno .... August 16, 2004.
Beale AFB .... August 12, 2004
King Salmon, AK .... August 4, 2004

RPG Build 6 will not change the Level II data format. However, the Level II format will change with the installation of the Open RDA. The Beta Test of RPG Build 7 software connected to an Open RDA is scheduled to begin the last week of November 2004 at the Norman, OK WFO. In January 2005, the beta test will continue at additional sites (to be determined later). The software will begin to be released to field sites at the end of February 2005 when the Open RDA field deployments are scheduled to begin, lasting about 15 months. The Radar Operations Center will release a draft Build 7 Interface Control Document (ICD) for "ArchiveII/User" within two months that will document the Level II format changes. Users will need to use the ICD to determine the changes their software will need.

4. The Radar Operations Center is installing BDDS in all CONUS DoD WSR-88D systems. The installations should be completed in September 2004. Build 6 software needs to be installed along with a digital connection to the associated NWS weather forecast office. Thus, as the DoD sites begin to install Build 6 on their system after release begins at the end of September, they will be added to the NWS Level II Data Collection and Distribution network. Due to the staggered release of software and the 60-day window for installation, the last CONUS DoD site might not be on line until the end of January 2005. The first new DoD site will be Beale AFB on 12 August as mentioned in para 3 above. These connections will have the full 128 kbps bandwidth as the NWS Level II data feeds.
5. The Full Operational Capability of the Level II Data Collection and Distribution network is scheduled for completion by the end of 2004. We are learning how the network works and will be adding data monitoring capabilities and procedures. We believe the reliability of data delivery will continue to increase as the network matures.
6. We continue to work with Unidata to set up the structure for redistributing real-time Level II data to universities. If a university has a question for Unidata in this regard they should contact: support@unidata.ucar.edu. Federal Level II users should contact me if they have questions concerning access to Level II data. The transition phase assistance we are receiving from the University of Oklahoma will end in October.
7. At this time, there are no firm plans for adding radars to the data collection network that are outside the CONUS.
8. Additional information about the Level II project is available at: http://www.roc.noaa.gov/NWS_Level_2/

Please feel free to send me additional questions and comments on this project, Tim.D.Crum@noaa.gov, or at 405-573-8888.

Attachment

WSR-88D SITES BY RDA ICAO DESIGNATOR
NOT SENDING LEVEL II DATA DIRECTLY TO SERVER AT UNIVERSITY OF MARYLAND VIA NWSNet
(i.e., Remaining Original CRAFT Sites)

As Of 21 July 2004

RDA ID	SITE
ABX	ALBUQUERQUE, NEW MEXICO
AKQ	NORFOLK (WAKEFIELD/RICHMOND), VIRGINIA
AMA	AMARILLO, TEXAS
ATX	SEATTLE, WASHINGTON
BGM	BINGHAMTON, NEW YORK
BHX	EUREKA, CALIFORNIA
BMX	BIRMINGHAM, ALABAMA
BOX	BOSTON (TAUNTON), MASSACHUSETTS
BUF	BUFFALO, NEW YORK
CAE	COLOMBIA, SOUTH CAROLINA
CCX	STATE COLLEGE, PENNSYLVANIA
CLE	CLEVELAND, OHIO
CLX	CHARLESTON, SOUTH CAROLINA
CYS	CHEYENNE, WYOMING
DIX	PHILADELPHIA, PENNSYLVANIA
DTX	DETROIT, MICHIGAN
DVN	QUAD CITIES (DAVENPORT), ILLINOIS
EMX	TUCSON, ARIZONA
ENX	ALBANY, NEW YORK
ESX	LAS VEGAS, NEVADA
EWX	AUSTIN/SAN ANTONIO, TEXAS
FCX	ROANOKE, VIRGINIA
FDR	FREDERICK (ALTUS AFB), OKLAHOMA
FSX	FLAGSTAFF ARIZONA
FTG	DENVER, COLORADO
FWS	DALLAS/ FT WORTH, TEXAS
GLD	GOODLAND, KANSAS
HTX	HYTOP (HUNTSVILLE), ALABAMA
ICT	WICHITA, KANSAS
ICX	CEDAR CITY, UTAH
ILN	WILMINGTON (CINCINNATI), OHIO
ILX	CENTRAL ILLINOIS (LINCOLN), ILLINOIS
IND	INDIANAPOLIS, INDIANA
INX	TULSA, OKLAHOMA
IWA	PHOENIX, ARIZONA
IWX	NORTH WEBSTER (FT WAYNE), INDIANA
LBB	LUBBOCK, TEXAS
LOT	CHICAGO, ILLINOIS

LSX	ST LOUIS, MISSOURI
LTX	WILMINGTON, NORTH CAROLINA
LVX	LOUISVILLE, KENTUCKY
LWX	STERLING, VIRGINIA
MHX	MOREHEAD CITY, NORTH CAROLINA
MKX	MILWAUKEE, WISCONSIN
MLB	MELBOURNE, FLORIDA
MTX	SALT LAKE CITY, UTAH
OHX	NASHVILLE, TENNESSEE
OKX	BROOKHAVEN, NEW YORK
PAH	PADUCAH, KENTUCKY
PBZ	PITTSBURGH, PENNSYLVANIA
RAX	RALEIGH/DURHAM, NORTH CAROLINA
RLX	CHARLESTON, WEST VIRGINIA
SRX	CHAFFEE RIDGE (FORT SMITH), ARKANSAS
TBW	TAMPA BAY, FLORIDA
TLX	OKLAHOMA CITY, OKLAHOMA
TWX	TOPEKA, KANSAS
VNX	VANCE AFB, OKLAHOMA